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BY

DOUGLAS AYRES, M.D.,

OF FORT PLAIN, N. Y.



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# A CASE OF PUERPERAL ECLAMPSIA AT THE SEVENTH MONTH; WITH A FEW THOUGHTS AS TO TREATMENT FROM PRACTICAL EXPERIENCE.[1]

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PUERPERAL eclampsia, threatening, as it always does, the life of the mother, cannot fail to seriously disturb the mind of any practitioner of medicine, however extensive may have been his experience. The mother, if she be in labor, suddenly complaining of pain in the head, perhaps of some derangement of vision, epigastric pain, dyspnea, etc., soon has a convulsive seizure, which, if once seen, can never be mistaken. The staring eyes, the wonderfully rapid contracture of the facial muscles, the rolling eyeballs, and the contracture of the muscles of the neck, drawing the face to the extreme right or left, with the livid appearance and protruded tongue, and saliva forced from the angles of the mouth, take away almost every semblance of "the human form divine." This, together with the contracture of the muscles of the extremities as well, is a condition which has doubtless been witnessed by every physician within hearing of my voice; and all who have seen it will acknowledge that it is one of the most serious conditions that we are called upon to treat; one in which the prognosis is always grave; one that requires early and most vigorous treatment.

[1] Read at the meeting of the New York State Medical Association, November, 1892.

We can congratulate ourselves, perhaps, upon the fact that it is not of frequent occurrence, as various statistics prove that it occurs but once in about five hundred pregnancies.

I have selected a case that occurred in my practice during the past year for this report, on account of its occurrence at the seventh month of utero-gestation, thereby offering serious complications. It is not my purpose at this time to discuss the etiology of eclampsia, further than to say that it may be of uremic, reflex, or apoplectic origin; that, while albumin in the urine may be a very constant attendant, cases may occur without any, or scarcely any, being present. Great excito-motor irritability may act reflexly and produce uremic attacks, as irritation of the gravid uterus; but cases that can be traced purely to these causes, I judge, from my reading and practical experience, to be very rare. Those of apoplectic origin are undoubtedly the most fatal. I would say, in this connection, that I believe that those investigators who think that the greater proportion of these cases have their origin in uremia are correct; that is, uremia in a general sense, including any or all of the constituents of the urine that may be retained as the result of imperfect action of the kidneys, together with marked increase of arterial tension.

CASE.—The husband of Mrs. F. H. called at my office July 5, 1891, to inform me that she was seven months advanced in a second pregnancy; that there was some puffiness of the face, and some edema of the lower limbs. I requested a specimen of her urine of the twenty-four hours, which I examined with reference to the presence of albumin, of which I found a large amount. The quantity of urine passed we estimated to be about one-third less than the normal average, or about thirty-four ounces. The usual treatment was advised: mental quietude, milk-diet, with iron tonics and mild laxatives.

About 4 P.M. of July 9th (four days after the first call)

I was again hastily summoned to attend her. Her mother gave me the following history: She had felt as well as usual on that day, until the afternoon, when she had complained of some pain in the head and had gone into another room to lie down upon a couch. Shortly afterward the mother heard a sound as of something falling, and hastily went into the room, where she found her daughter lying upon the floor in an unconscious condition. There were slight convulsive movements. She recovered consciousness in a short time, when they placed her upon the couch, where she lay quietly, asking some questions with regard to what had happened, but in a somewhat dazed manner.

When I arrived, she seemed perfectly conscious of her surroundings, and answered intelligently the few questions that I asked her. I remembered that I had attended her in confinement eleven years before, and that immediately after the birth of the child she had an eclamptic convulsion, for the relief of which I bled her very freely (nearly thirty ounces), which seemed only sufficient to reduce the force and volume of the pulse, after which she rallied; and very luckily there was no recurrence.

I found her face puffy, and the lower extremities quite edematous. She was thirty-six years old, a person of full habit, weighing perhaps one hundred and forty or fifty pounds. The kidneys had acted about as usual (as well as the family could judge) for the past few days; if there was any change there was a little falling off in the amount of urine passed, from our previous estimate. I found a full, strong pulse, flushed face, and heat of head. I ordered cold applications to the head, and, as the bowels had not acted as freely as desirable, also a stimulating enema, which met with a fair response; and gave immediately afterward a full dose of calomel and jalap. She was soon seized with a severe convulsion. I immediately opened a vein, with a good free opening, from which I allowed the blood to flow, until its effect was very

perceptible upon the pulse (which required the loss of nearly twenty-five ounces), when she slowly returned to consciousness. I then made a vaginal examination, and found the os somewhat softened and dilatable.

There were at this time marked labor-pains. Making use of the fingers as my dilators, I began slowly and carefully to dilate, and found that the parts yielded very satisfactorily. When the efforts of the uterus, which had now somewhat increased, had pressed the head well down in the os, I administered three-quarters of a dram of fluid extract of ergot, with one-third of a grain of morphine, and shortly after applied the forceps, making gentle traction with each expulsive pain; and in a short time succeeded in delivering a dead child. The uterus was well and carefully kneaded, and within one-half or three-quarters of an hour the placenta was expelled.

There was but a moderate amount of hemorrhage, as the uterus seemed to contract fairly well. The patient was now breathing easily, but was quite unconscious, making an effort to open the eyes, if spoken to in a raised tone of voice; the pulse was of fair strength and regular. I found that she could swallow, and ordered a few ounces of milk, which was slowly given. She remained in this condition for about three hours, when another convulsion occurred, which was perhaps, as to tonic contraction and length of time, not so severe as the last. Shortly after this attack I relieved the bladder of several ounces of urine, and found it to contain about the same quantity of albumin.

I should have made use of chloral before this time; but as I was some distance in the country, and found that I had none with me, I was not able to do so. I obtained some, however, about two hours later, at which time there were evidences that another convulsion was about to occur. I immediately injected, per rectum, fifty grains, properly guarded with mucilage, having found

that a less amount does not usually produce the desired effect. The woman was quiet from this time as to any evidences of contracture for nearly six hours (breathing as in sleep); when with the first evidences of muscular movements the same amount was again injected. I found this to be necessary at about the same intervals, until four injections had been administered; when all evidences of recurrence ceased. This was about thirty-six hours from the second attack. The bladder was relieved during this period at intervals of six or seven hours, each time of a few ounces of urine, which was of about the same character as to appearance and amount of albumin as the first drawn.

The patient remained unconscious for nearly fifty hours, but was able to take some nourishment, which was given in the form of milk at regular intervals, or at such times as she could be induced to swallow. From this time she slowly began to recover; her convalescence extending over a period of sixteen or seventeen days, during which time she suffered from amblyopia to such a degree as not to be able to recognize the members of her family or any object brought within the usual focal distance. There was a good deal of muscular tenderness, and quite marked prostration. The after-treatment was tonic and alterative, under which she made fairly rapid progress to complete recovery.

There are a few questions of importance which the treatment of this case suggests:

1. What of the importance of venesection for the relief of the condition?

2. What cases would be most likely to be benefited by it?

3. What of the use of chloral as a therapeutic measure, as against chloroform by inhalation and morphine by subcutaneous administration?

I believe, as to the first, that its prompt action renders it an agent of the utmost importance; that it relieves

the brain by lessening the force of the circulation and consequent arterial tension, and many times wards off a serious brain-lesion; but that it be practised early is of the utmost importance, before irreparable injury has been accomplished. Again, it gives us time to make use of other remedial agents, such as will relieve the general oppression, and, as a prominent writer has said, favors absorption and renders the patient more susceptible to their influence.

Secondly, I believe that women of full habit, with suffused face, and full, slow pulse, showing much arterial tension, will always be greatly benefited by venesection. My personal experience has been that when this important measure has been neglected the difficulty has much more frequently proved fatal. I call to mind in this connection, eight cases, seven of which were consecutive, that I treated by bleeding, three with the addition of chloral to the treatment, with a mortality of one—that one a primipara six months advanced. She was a person of full habit, had two very severe convulsions before I saw her, and, although I bled her freely, there was no return to consciousness; and I judged from the evidences that a serious brain-lesion had taken place early, perhaps with the first seizure. Barquissau says: "It diminishes the general mass of the blood; relieves the nerve-centers, which have a tendency to become congested; and by making the spinal bulb anemic, we deaden reflex irritability, which keeps up the hyperemia and by which the convulsive attack may be revived."

It is now somewhat more than twenty years since chloral hydrate became generally known as a remedy in the treatment of eclampsia, either by the mouth or otherwise. My first experience in the use of it was subcutaneously. I was called in consultation in a very severe case, in which the patient had suffered from a number of convulsive seizures after free venesection. I had seen, a few days before, an article in one of our

journals with regard to the use of chloral hydrate subcutaneously in these cases. I advised it, and we made trial of it, injecting freely in the lower extremities. It relieved our patient, but it was some time before the ulcerations, resulting from the irritation caused by the chloral, were healed. I have since used it per rectum (thereby avoiding a repetition of my first unpleasant experience), as it is much more quickly and easily administered in this way, and as many times it cannot be given by the mouth. I should certainly much prefer it to chloroform; for, although chloroform arrests the convulsive seizures, it usually does so only for a short time, and the patient cannot be kept under its influence for a considerable length of time without danger. Some of the more prominent objections to its use that have been mentioned are that it produces congestion of the nerve-centers, and so may increase cerebro-spinal congestion; also the asphyxia, to which complication there is a predisposition. Depaul admits that to a certain extent it does modify the eclamptic attacks, but says: "They exist none the less, as well as the complications—congestions, central hemorrhages, pulmonary congestions, etc."

There is no doubt but that we have in morphine and chloroform valuable remedies, the effects of which have been closely and practically investigated by the profession, and that they have held their place in professional confidence. Still, it seems to me that some of the arguments presented, especially those against the long-continued use of the latter, are well chosen. As to morphine subcutaneously, I could fully indorse its use, in doses not to exceed a quarter of a grain, to be repeated in case it be found necessary within a limited length of time, say one hour; but I should fear the heroic doses recommended by some writers, of from one-half to one grain, and boldly repeating upon evidences of recurrence; notwithstanding the fact that great

tolerance of the drug has been urged in the eclamptic condition.

More definitely as to the last proposition, I believe that we have in chloral hydrate an agent of wonderful therapeutic value for the relief of reflex irritation; and that in the two, venesection first, judiciously, promptly, and boldly done, followed by chloral if the convulsions continue, we have measures that will never be supplanted by any more perfect or potent. After an experience of twenty-seven years of active practice, I can recall many cases treated in this manner, and the great majority have recovered: some by venesection alone, others by venesection and chloral hydrate combined. The former has, however, been my sheet-anchor, and I firmly believe that, if early and judiciously done, it will in the future, as it has in the past, save many mothers from an untimely death.